

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-009949**Date Inspected:** 05-Oct-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Jha and Xu Yumin**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Trail Assembly**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) S. Manjunath. Math was present during the times noted above for observations relative to the work being performed.

Orthotropic Box Girder (OBG) Trial Assembly Area

Lift 1 East

This Quality Assurance (QA) Inspector witnessed final tension verification for Catwalk Structure from PP 8.5 to PP 12.5 for Segment Lift 1 East (1AE and 1BE). Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used are M16x45 RC Lot No. DHGM160010 and final Torque required was 200 N-m

Manual Torque wrench has been used with Serial No. XO2-114.

Segment 5CE

This Quality Assurance (QA) Inspector witnessed final tension verification for Lower Chevron Brace at North (Cross Beam) side at PP 35 for Segment 5CE. Inspected 10% on a random basis and found the tension to be in general compliance.

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Bolt sizes used are M22x70 RC Lot No. DHGM220004 and final Torque required was 453 N-m and

Bolt sizes used are M22x80 RC Lot No. DHGM220050 and final Torque required was 486 N-m i.e., (23 Mpa)

Manual Torque wrench has been used with Serial No. XQ2-590 and Hydraulic Wrench was been used for inaccessible areas with Model No. MP532-2 and with Serial No. PW090331002.

### Segment 5AW

This Quality Assurance (QA) Inspector witnessed final tension verification for Bottom Panel to T-Rib connecting Clips at PP 29, PP30 and PP 31 for Segment 5AW. Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used are M16x45 RC Lot No. DHGM160002 and final Torque required was 250 N-m and

Bolt sizes used are M16x65 RC Lot No. DHGM160006 and final Torque required was 180 N-m.

Manual Torque wrench has been used with Serial No. XQ2-114.

### Segment 5BW

This Quality Assurance (QA) Inspector witnessed final tension verification for Bottom Panel to T-Rib connecting Clips and Side Panel to T-Rib connecting Clips for (North and South side) at PP 32, PP33 and PP 34 for Segment 5BW. Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used are M16x45 RC Lot No. DHGM160002 and final Torque required was 250 N-m

Bolt sizes used are M16x50 RC Lot No. DHGM160003 and final Torque required was 200 N-m and

Bolt sizes used are M16x65 RC Lot No. DHGM160006 and final Torque required was 180 N-m.

Manual Torque wrench has been used with Serial No. XQ2-114.

### Segment 5CW

This Quality Assurance (QA) Inspector witnessed final tension verification for Bottom Panel to T-Rib connecting Clips and Side Panel to T-Rib connecting Clips for (North and South side) at PP 35 and PP 35 for Segment 5CW. Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used are M16x45 RC Lot No. DHGM160002 and final Torque required was 250 N-m

Bolt sizes used are M16x50 RC Lot No. DHGM160003 and final Torque required was 200 N-m and

Bolt sizes used are M16x65 RC Lot No. DHGM160006 and final Torque required was 180 N-m.

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Manual Torque wrench has been used with Serial No. XQ2-114.

Lift 2 (East)

This QA Inspector performed dimensional verification and recorded the Offset and Sweep for Longitudinal Diaphragm, Cross Beam Side. ZPMC QC and ABF Engineer too were involved during the inspection as being a joint inspection.

Lift 2 (West)

This QA Inspector performed Ultrasonic Test along with Mr. Bert Madison, Mr. Subahish Bera and Mr. Christopher to the Transverse Segment Weld for segment Lift 2 West Side Panel Counter Weight side for weld no. OBW2A-002 and OBW2A-003. Prepared a consolidated report for the all the inspectors involved and consolidated report submitted to Mr. John Kinsey for review.

Segment 5BE and Segment 5CE

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Longitudinal Diaphragm. The weld joint was been performed against B-WR6986 Rev.0. The welder is identified as 062092. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-SMAW-4G (4F)-Repair.

Segment 5AE to Segment 5BE

This QA Inspector observed ZPMC welding personnel performing Heat Straightening for Longitudinal Diaphragm Cross Beam side. The Heat Straightening was been performed against HSR1 (B)-7674 Rev.0 for LD 5BE to 5AE.

Segment 5BE and 5CE

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Transverse Segment weld at Bottom Panel after back gouging from external side. The weld joint was been identified as OBE 5A-008. The welder is identified as 067571. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2212-Tc-U4b-F.

CB4

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for CB4 west side next to FL3 at PP 32 of 5BE. The weld joint has been identified as CB201A-CB4-001. The welder is identified as 068764. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2212-Tc-U4b-F.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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### Summary of Conversations:

No relevant conversations.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Math,Manjunath
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Quality Assurance Inspector
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<b>Reviewed By:</b>	Carreon,Albert
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QA Reviewer
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